#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-019755 Address: 333 Burma Road **Date Inspected:** 20-Dec-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Oiu Wen **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** OBG

### **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

BAY 14, OBG 13AW (NWIT # 7849)

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA inspector generated MT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows.

SEG3013Y-339, 341, 347, 353, 359, 514, 518, 520, 524, 542, 549 RS3486C-001, 002 RS3486D-001, 002 SEG3013H-137, 138, 141, 142

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 14

OBG Seg 13AW:



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Repair welding of weld joint no: SEG3013L-022 [Floor Beam (FB) 3185A to Floor Beam (FB) 3186A, complete joint penetration (CJP) weld at panel point (PP) 119 - 1500]. The welder is identified as 066163 and was observed welding in the 1G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC QC was identified as Mr. Qiu Wen. The welding variables recorded by this QC appeared to comply with Welding Procedure Specification (WPS): 345-SMAW-1G(1F)-FCM-Repair. Repair welding was done as per Welding Repair Report (WRR): B-WR 19215 Rev-0.

Repair welding of weld joint no: SEG3013Q-027 [Floor Beam (FB) 3177A to Floor Beam (FB) 3178A, complete joint penetration (CJP) weld at panel point (PP) 118]. The welder is identified as 066163 and was observed welding in the 1G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC QC was identified as Mr. Qiu Wen. The welding variables recorded by this QC appeared to comply with Welding Procedure Specification (WPS): 345-SMAW-1G(1F)-FCM-Repair. Repair welding was done as per Welding Repair Report (WRR): B-WR 19216 Rev-0.

### OBG Seg 13BW

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3014D-350 [Vertical Plate (VP) 3013 to Floor Beam (FB) 3212, CJP weld; at Panel Point (PP) PP121.5]. The welder is identified as 045276 and was observed welding in the 3G position. ZPMC QC was identified as Mr. Zhang Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2233-ESAB.

# **OBG Seg 13CW**

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3015K-189 [Flange X4453A to Floor Beam (FB) 3220, CJP weld; at Panel Point (PP) PP122.5]. The welder is identified as 201583 and was observed welding in the 2G position. ZPMC QC was identified as Mr. Zhang Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2232-ESAB.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3015B-271 [Vertical Plate (VP) 3015 to Side Plate (SP) 3112, CJP weld; in between Panel Points (PP) 122.5 to 123]. The welder is identified as 066038 and was observed welding in the 2G position. ZPMC QC was identified as Mr. Zhang Lin. The welding variables recorded by QC appeared to comply with WPS: B-P-2212-Tc-U4b-FCM-1.

#### OBG Seg 14W

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020AY-015 [Bottom Plate (BP) 3088 to Side Plate (SP) 3134A, CJP weld]. The welder is identified as 045246 and was observed welding in the 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-P-2214-B-U2.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020AY-014 [Bottom Plate (BP) 3088 to Side Plate (SP) 3132A, CJP weld]. The welder is identified as 051348 and was observed welding in the 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply

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with WPS: B-P-2214-B-U2.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

# **Summary of Conversations:**

Only general conversation was held between QA and QC concerning this project.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang: 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Umesh	Quality Assurance Inspector
Reviewed By:	Patterson, Rodney	QA Reviewer